22. (Previously Added) The method of claim 19, wherein the step of adhering comprises gluing or welding.

REMARKS

The amended claims as presently recited contain features hereinafter argued in support of patentability over Roche et al.

Further, the claims as presently amended better distinguish between the protective layer (a feature of the prior art of Roche et al.) and applicants' innovation of the protective shield layer having a requisite thickness range of 2-8mil, by inserting the phrase "further comprising" so as to make it clearer that the corrosion and ultra violet-resistant protective shield layer is set-apart from the protective layer of the prior art.

Further still, FIGS. A and B of the submitted Affidavit is in sync with original FIG. 4 in that it establishes superior and unexpectant results over the Silverlux corrosion-resistant silver mirror construction of Roche et al. In other words, the invention silver mirror (which retains specular optical efficiency and clarity throughout the UV and visible spectrum in a solar reflector) is inventive over the corrosion and ultraviolet resistant silver mirror and process for making the same in Roche et al. alone or Roche et al. in view of Schissel et al., further in view of Sugisaki et al.

In the art of the use of silver mirrors in solar reflectors, wherein silver is substantially higher in reflectivity than other metals, wherein specular reflectance over time is impared due to abrasion, weathering, and ultraviolet degradation, applicants are the first to invent a silver mirror for use in solar reflectors, in which: the measured spectral hemispherical reflectance is retained with high optical clarity through the UV and visible spectrum at near 100% reflectance where

superior durability of solar weighted hemispherical reflectance % is beyond 5 years (Affidavit, FIG. A); and resistance to moisture induced delamination exceeds 60 days (Affidavit FIG. B).

The silver mirror of the invention is made by:

(a) providing a polymeric substrate;

(b) bonding a specular-reflective silver layer to said polymeric substrate;

(c.) bonding a protective layer of a transparent-film forming polymer to said silver layer; and

(d) adhering a protective shield layer that enables said silver layer to retain spectral hemispherical reflectance and high optical clarity throughout the UV and visible spectrum when used in solar reflectors, said protective shield layer incorporating a UV absorber and comprising a transparent multipolymer film of a thickness range of 2-8 mil on the protective layer.

Roche et al. 4,645,714 imparts corrosion resistance to silver mirrors by vapor depositing silver on a polyester film and protectively covering it with a coating of transparent acrylate polymer containing a silver corrosion inhibitor such as glycol dimercaptoacetate. Upon employing a pressure-sensitive adhesive on the opposite face of the polyester film, degradation of the polyester and consequent bubbling of the adhesive is reduced or eliminated by incorporating a UV absorber in a second polymer layer covering the protective transparent acrylate polymer layer.

By contrast, applicants' silver mirror structure, as shown by results in FIG. A in the Affidavit, retains solar weighted hemispherical reflectance of close to 100% beyond 5 years compared to the conventional Silverlux silver mirror of Roche et al., which drops off precipitously at about 2 years.

In its specification from page 6, line 17 to page 7, line 13, applicants have shown that reference numeral 26 of FIG. 2 is the conventional Silverlux mirror of Roche et al., and that layer

17 having a thickness from 2-8 mils is the transparent multi-polymer film incorporating the UV absorber that is applicants' innovation, which is affixed to the base Silverlux mirror of Roche et al.

In Roche et al., there is no reference to or mention of, the need for a second protective layer of a transparent multipolymer film affixed to its mirror, let alone a second protective layer of a transparent multipolymer film having a thickness of 2-8 mils.

Schissel et al. only disclose metallized polymer mirror constructions of improved durability by virtue of having an oxide layer interposed between an outer layer of polymeric material and the reflective layer of silver, wherein the oxide acts as an adhesive layer to impede initiation of delamination as well as tunneling when delamination occurs. In the oxide layer of Schissel et al., (which acts as an adhesive layer), is interposed between the outer layer polymeric material and the reflective layer of silver in Roche et al., applicants' invention as presently recited would not result. Neither would applicants' invention as presently recited in the amended claims result if the acrylic polymeric layer of Schissel were substituted for the UV containing acrylic polymeric layer of Roche et al. for the reason that applicants invention in fact affixes a second protective layer of a transparent multipolymer film to the base Silverlux material of Roche et al.

Sugisaki et al. is non-related art in that it describes an electrostatic recording material for an electrostatic plotter that outputs a color image in the CG (computer graphics) or CAD (Computer Aided Design) system. As much, it is insufficient to compensate for the deficiencies mentioned in connection with Roche et al. and Schissel et al. for the reason that, even though Sugisaki et al. utilizes UV absorbers in the substrate of adhesive sheet to be laminated, there would be no incentive for or reason why one skilled in the art of making silver mirrors for solar

reflectors that lack sufficient solar weighted hemispherical reflectance and inadequate delamination protection to look to the non related art of electrostatic recording material – particularly the adhesive layer used therein to find a solution to minimize or eliminate inadequate solar weighted hemispherical reflectance or inhibit delamination – let alone utilize an adhesive layer containing a UV absorber from the electrostatic recording material and combine it with the layers in the silver mirror construction of either Roche et al. and Schissel et al. alone or Roche et al. and Schissel et al. in combination.

The accompanying Affidavit of unexpected results from co-inventors Randy Gee and Gary Jorgensen clearly demonstrate superior and unexpected results in solar weighted hemispherical reflectance of the silver mirror of the present invention compared to that of the Silverlux silver mirror construction of Roche et al. , in that the silver mirror construction of Roche et al. deteriorated significantly after two years upon total UV dose MJ/m2 of about 600, whereas the silver mirror construction of the present invention even after 5 years upon exposure to a total UV dose in excess of about 1700 MJ/m^2 maintained its initial solar weighed hemispherical reflectance.

Likewise, as can be seen in FIG. B of the Affidavit, the resistance to moisture induced delamination of the present invention was beyond 60 days, whereas that of ECP-305 which is a silvered polymethylmethacrylate film having a thickness of approximately 3.5 mils of the 3M company experienced total delamination prior to 30 days of water exposure time.

It is respectfully requested that the forgoing be taken into consideration before the application is taken up for examination on the merits.

Respectfully submitted,

Dated: July 7, 2004.

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CERTIFICATE OF MAILING UNDER 37 CFR § 1.8

I hereby certify that the following attached Resubmitted Request for Continuous Examination containing 8 pages and self-addressed Postcard receipt are being deposited in the United States Postal Service as first class mail, postage pre-paid, in an envelope addressed to: Commissioner for Patents, U.S. Patent & Trademark Office, P.O. Box 1450, MS Non-Fee Amendment, Alexandria, Va 22313-1450 on this 8th day of July 2004.

Brenda E. Brantley
Senior Patent Administrator